

REMARKS

The Office Action mailed April 28, 2005 and references cited therein have been reviewed. Several of the pending claims were objected to due to a grammatical error. Applicants have amended claims 1, 29 and 62 to correct this error. The Examiner objected to claims 11 and 37 and indicated that such claims would be allowable if placed in independent form. Accordingly, Applicants have amended such claims, thus submit that such claims are now in allowable form.

THE SECTION 112 REJECTIONS

The Examiner rejected claims 2, 4, 6, 10, 12-16, 18, 21, 22, 24, 29-41, 49, 51, 53, 54 and 57-63 under 35 U.S.C. §112(2) as being indefinite.

The Examiner indicated that claim 2 was indefinite and vague regarding the weight of the tube relative to the speed of the wire traveling through the tube. As the Examiner is aware, the weight of the tube results in a downward force (F_g) resulting from gravity which can be represented by $F_g = mg$, wherein m is the mass of the tube and g is the gravitational force (-9.8 m/s^2). For applications on Earth, the mass of the tube is the weight of the tube. As the wire travels through the tube, the wire contacts the sides of the tube resulting in friction. Typically, during a welding procedure, the wire speed through the tube is relatively constant. The friction between the wire and the tube is also relatively constant during a welding procedure. As such, the upward force (F_u) on the tube resulting from the wire moving through the tube is $F_u = b V$, wherein b is the coefficient of friction and V is the velocity of the wire traveling through the tube. The coefficient of friction will depend on several factors, such as the material used to form the tube, the surface profile of the passageway of the tube (e.g., smooth, rough, etc.), the size of the passageway, the size of the wire passing through the tube, the flexibility of the wire, etc. All these factors are generally constant during the feeding of the wire from the wire container. As such, the weight of the tube can be

selected so that the average upward force (F_u) on the tube resulting from the wire moving through the tube is about equal to the average downward force (F_g) resulting from the gravity force on the tube. Applicants have amended claim 2 to clarify that the downward force on the tube resulting from the weight distribution of the tube is about equal to an upward force applied to the tube as the welding wire being paid out of the container passes into and through the passageway of the tube.

The Examiner rejected claims 3 and 30 for including the limitation “weight profile”. The specification uses the terms “weight profile” and “weight distribution” interchangeably. Applicants have amended the claims so that only the term “weight distribution” is used.

The Examiner rejected claim 7 for not further limiting claim 5. Applicants amended claim 7 to now depend on claim 3.

Claims 29 and 62 were rejected for referring to “a lower partition”. Applicants have amended claims 29 and 62 to remove this term from the claims.

Claims 14-16 and 39-41 were rejected for including the term “low friction”. Applicants have amended the claims to clarify that the bevel or passageway includes and/or is coated with a low friction material. Several non-limiting examples of low friction materials are disclosed in the specification. (See page 12, lines 9-18; page 24, lines 15-17).

Applicants submit that all the pending claims are in proper form pursuant to 35 U.S.C. §112.

THE SECTION 102 REJECTION

Claims 1, 2 and 15 were rejected under 35 U.S.C. §102(b) as being anticipated by Wright. Claim 1 has been amended to include the limitation that at least a portion of the flexible tube is at least partially flexible. Wright discloses a weighted sleeve 56 formed of a heavy material such as iron that is used to prevent premature unwinding of more than the lead turn of the coil. The weighted sleeve is not disclosed as including a flexible material. The described function of the weighted

sleeve does not allow for floating of the weighted sleeve above a top surface layer of wire. If the weighted sleeve floated above the top surface layer of wire, the weighted sleeve could not “prevent” premature unwinding of more than the lead turn of the coil. Only when the weighted sleeve firmly rests at all times on the top layer of the wire can the weighted sleeve “prevent” premature unwinding of more than the lead turn of the coil.

For at least these reasons, independent claim 1 and all the claims dependent therefrom are not anticipated by Wright.

THE SECTION 103 REJECTIONS

Claims 1-8, 15, 23-34, 40, 49, 51, 53, 54 and 57-63 were rejected under 35 U.S.C. §103(a) as being unpatentable over Lingle in view of the Fig. 1 in Applicants’ application. The Examiner asserted that Lingle discloses a floating liner. Applicants disagree. Lingle does not disclose, teach or suggest an at least partially flexible tube that can float above a top layer of wire. The tube 24 is rigidly secured to fitting 27 and posts 26. A coil of steel strapping is positioned on a rotating tray 20 and an end of the strapping is fed into the tube 24. The opening 29 of the tube remains rigidly in place relative to the steel strapping. As such, a portion of the tube does not and cannot float up and down above the steel strapping. For at least these reasons alone, Lingle cannot be used alone or in combination with other art to support a rejection of any of the pending claims.

Claims 62 and 63 were rejected under 35 U.S.C. §103(a) as being unpatentable over Wright in view of the Fig. 1 in Applicants’ application. The deficiencies of Wright have been previously discussed above. Wright does not disclose, teach or suggest a floating tube, much less a floating tube that is at least partially flexible. For at least these reasons alone, Wright cannot be used alone or in combination with other art to support a rejection of any of the pending claims.

Claims 9-10 and 35-36 were rejected under 35 U.S.C. §103(a) as being unpatentable over

Lingle in view of the Fig. 1 in Applicants' application, and further in view of Boulton. As stated above, Lingle does not disclose, teach or suggest an at least partially flexible tube that can float above a top layer of wire. Boulton also does not disclose a flexible liner that floats above wire being fed out of a container. Boulton does disclose a conduit 40 that is fixed in place relative to reel 12. The wire guide member 18 is fixed in position on frame member 20 so as to maintain the vertical distance of the wire guide member 18 from the reel. Consequently, Boulton does not disclose a floating tube. For at least these reasons alone, Boulton cannot be used alone or in combination with other art to support a rejection of any of the pending claims.

Claim 61 was rejected under 35 U.S.C. §103(a) as being unpatentable over Wright in view of the Fig. 1 in Applicants' application, and further in view of Priest. Priest was cited to support a rejection of a tube formed from a nonmetallic material. Priest does not disclose, teach or suggest any type of floating liner or flexible floating liner. As such, Priest, in combination with Wright and Fig. 1 in Applicants' application does not overcome the deficiencies of Wright and Fig. 1 as previously discussed. For at least these reasons alone, Priest cannot be used alone or in combination with other art to support a rejection of any of the pending claims.

Applicants submit that all the claims pending in the above-identified patent application are in allowable form.

Respectfully submitted,
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